WE CLAIM:

1. A method for detecting a cancer cell in a subject, said method comprising determining the level of nucleic acid that is linked to map position 8q22.3 of the human genome or an expression product thereof in a sample of said subject, wherein an elevated level of said nucleic acid or said polypeptide is indicative of cancer in the subject.

2. The method according to claim 1 wherein the cancer cell is epithelial in origin.

3. The method according to claim 1 or claim 2 wherein the cancer cell is from a cancer selected from the group consisting of ovarian cancer, melanoma, metastatic melanoma, squamous cell carcinoma of the head and neck, squamous cell carcinoma of the tongue, hepatocellular carcinoma, breast cancer, a metastases of ovarian cancer, a metastases of melanoma, a metastases of metastatic melanoma, a metastases of squamous cell carcinoma of the head and neck, a metastases of squamous cell carcinoma of the tongue, a metastases of hepatocellular carcinoma and a metastases of breast cancer.

4. The method according to any one of claims 1 to 3 wherein the nucleic acid that is linked to map position 8q22.3 of the human genome comprises the genomic *Edd* and *p53R2* genes or a portion thereof.

5. The method according to any one of claims 1 to 4 wherein the nucleic acid that is linked to map position 8q22.3 of the human genome comprises a genomic gene encoding an EDD protein.

6. The method of claim 5 wherein the EDD protein is a polypeptide that comprises an amino acid sequence having at least 80% identity to the sequence set forth in SEQ ID Nos: 2 or 4.

7. The method of any one of claims 1 to 6, said method comprising:
   (i) determining the level of nucleic acid linked to map position 8q22.3 of the human genome in a test sample from said subject; and
   (ii) comparing the level of the nucleic acid at (i) to the level of the nucleic acid in a reference sample from a healthy or normal individual,

   wherein a level of the nucleic acid at (ii) that is enhanced in the test sample relative to the reference sample from the normal or healthy individual is indicative of the presence of a cancer cell in said subject.

8. The method of claim 7 wherein the test sample and the reference sample comprise a cell from a tissue selected from the group consisting of skin, an oral cavity tissue, breast, liver, spleen, ovary, prostate, kidney, uterus, placenta, cervix, omentum, rectum, brain, bone, lung, lymph, urine, semen, blood, abdominal fluid, and serum.

9. The method of any one of claims 1 to 8 wherein the level of nucleic acid linked to map position 8q22.3 of the human genome is determined by hybridizing a nucleic acid probe to genomic DNA encoding an EDD protein in the sample under stringency hybridization conditions and detecting the hybridization using a detection means.

10. The method of claim 9 wherein the detection means is nucleic acid hybridization or amplification reaction.

11. The method of any one of claims 1 to 10 wherein the level of nucleic acid that is linked to map position 8q22.3 of the human genome is determined by hybridizing a nucleic acid probe or primer to genomic DNA and detecting the hybridization, wherein the probe or primer comprises a nucleotide sequence selected from the group consisting of:
   (i) the sequence set forth in SEQ ID NO: 5;
   (ii) the sequence set forth in SEQ ID NO: 6;

(iii) the sequence set forth in SEQ ID NO: 7;
(iv) the sequence set forth in SEQ ID NO: 24;
(v) the sequence set forth in SEQ ID NO: 25; and
the sequence of a nucleic acid fragment produced by amplification using any one of (i) to (v) as amplification primers in PCR.

12. The method of any one of claims 1 to 11 wherein the sample has been obtained previously from the subject.

13. The method of any one of claims 1 to 10 wherein the level of nucleic acid that is linked to map position 8q22.3 of the human genome is determined by hybridizing a nucleic acid probe or primer to genomic DNA and detecting the hybridization, wherein the probe or primer comprises a nucleotide sequence selected from the group consisting of:
(i) the sequence set forth in SEQ ID NO: 3;
(ii) the sequence set forth in SEQ ID NO: 5;
(iii) the sequence set forth in SEQ ID NO: 6;
(iv) the sequence set forth in SEQ ID NO: 7;
(v) the sequence set forth in SEQ ID NO: 24;
(vi) the sequence set forth in SEQ ID NO: 25;
(vii) the sequence of a nucleic acid fragment produced by amplification using (vi) and (vii) as amplification primers in PCR;
(viii) the sequence set forth in SEQ ID NO:26;
(ix) the sequence set forth in SEQ ID NO: 27;
(x) the sequence of a nucleic acid fragment produced by amplification using (ix) and (x) as amplification primers in PCR;
(xi) the sequence set forth in SEQ ID NO: 28;
(xii) the sequence set forth in SEQ ID NO: 29;
(xiii) the sequence set forth in SEQ ID NO: 30;
(xiv) the sequence of a nucleic acid fragment produced by amplification using (xii) and (xiii) as amplification primers in PCR;
(xv) the sequence set forth in SEQ ID NO: 33;

(xvi) the sequence set forth in SEQ ID NO: 34;

(xvii) the sequence of a nucleic acid fragment produced by amplification using (xv) and (xvi) as amplification primers in PCR;

(xviii) the sequence set forth in SEQ ID NO: 37;

(xix) the sequence set forth in SEQ ID NO: 38;

(xx) the sequence of a nucleic acid fragment produced by amplification using (xviii) and (xix) as amplification primers in PCR;

(xxi) the sequence set forth in SEQ ID NO: 40; and

(xxii) a sequence that is complementary to any one of (i) to (xxi).

14. A method for detecting a cancer cell in a subject, said method comprising:

(i) determining the level of mRNA encoded by nucleic acid linked to map position 8q22.3 of the human genome that is expressed in a test sample from said subject; and

(ii) comparing the level of the mRNA determined at (i) to the level of mRNA encoded by nucleic acid linked to map position 8q22.3 of the human genome that is expressed in a reference sample from a healthy or normal individual,

wherein a level of the mRNA at (i) that is enhanced in the test sample relative to the reference sample from the normal or healthy individual is indicative of the presence of a cancer cell in said subject.

15. The method of claim 14 wherein the mRNA encodes an EDD protein.

16. The method of claim 14 or claim 15 wherein the mRNA encodes an EDD polypeptide that has at least about 80% identity to SEQ ID NO: 2 or 4.

17. The method of claim 15 or claim 16 wherein the mRNA has 80% identity to the nucleotide sequence set forth in SEQ ID NO: 1 or 3.

18. The method of claim 14 wherein the mRNA encodes a p53R2 protein.

19. A method for diagnosing a cancer or predicting recurrence of a cancer in a subject comprising determining the level of mRNA or protein encoded by nucleic acid linked to map position 8q22.3 of the human genome in a sample of said subject, wherein an elevated level of said mRNA or protein is indicative of relapse of a cancer in said subject.

20. The method according to claim 19 wherein the cancer cell is epithelial in origin.

21. The method according to claim 19 or claim 20 wherein the cancer cell is from a an ovarian cancer.

22. The method of any one of claims 19 to 21 wherein the mRNA encodes an EDD protein.

23. The method of any one of claims 19 to 22 wherein the mRNA encodes an EDD protein that has at least 80% homology to SEQ ID NO: 2 or SEQ ID NO: 4.

24. The method of any one of claims 19 to 21 wherein the protein is an EDD protein.

25. The method of claim 24 wherein the EDD protein has at least 80% homology to SEQ ID NO: 2 or SEQ ID NO: 4.

26. An isolated nucleic acid molecule for detecting a cancer cell comprising a nucleotide sequence selected from the group consisting of:
a sequence that encodes the amino acid sequence set forth in SEQ ID NO: 4 wherein said amino acid sequence lacks the sequence VLLLPL;
(i) the sequence set forth in SEQ ID NO: 3;

(ii) the sequence set forth in SEQ ID NO: 5;
(iii) the sequence set forth in SEQ ID NO: 6;
(iv) the sequence set forth in SEQ ID NO: 7;
(v) the sequence set forth in SEQ ID NO: 24;
(vi) the sequence set forth in SEQ ID NO: 25;
(vii) the sequence of a nucleic acid fragment produced by amplification using (vi) and (vii) as amplification primers in PCR;
(viii) the sequence set forth in SEQ ID NO:26;
(ix) the sequence set forth in SEQ ID NO: 27;
(x) the sequence of a nucleic acid fragment produced by amplification using (ix) and (x) as amplification primers in PCR;
(xi) the sequence set forth in SEQ ID NO: 28;
(xii) the sequence set forth in SEQ ID NO: 29;
(xiii) the sequence set forth in SEQ ID NO: 30;
(xiv) the sequence of a nucleic acid fragment produced by amplification using (xii) and (xiii) as amplification primers in PCR;
(xv) the sequence set forth in SEQ ID NO: 33;
(xvi) the sequence set forth in SEQ ID NO: 34;
(xvii) the sequence of a nucleic acid fragment produced by amplification using (xv) and (xvi) as amplification primers in PCR;
(xviii) the sequence set forth in SEQ ID NO: 37;
(xix) the sequence set forth in SEQ ID NO: 38;
(xx) the sequence of a nucleic acid fragment produced by amplification using (xviii) and (xix) as amplification primers in PCR;
(xxi) the sequence set forth in SEQ ID NO: 40; and
(xxii) a sequence that is complementary to any one of (i) to (xxi).

27. An isolated or recombinant protein complex comprising:
(i) an EDD protein or a portion of an EDD protein sufficient to bind to a protein selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory

activity, a protein associated with DNA repair or damage, a nuclear targeting protein, and a progesterone receptor protein; and

(ii) a nuclear protein selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory activity, a protein associated with DNA repair or damage, a nuclear targeting protein and a progesterone receptor protein or a portion of said protein sufficient to bind to said EDD protein or said portion of an EDD protein.

28. The isolated or recombinant protein complex of claim 27 wherein the protein having tumor suppressor activity is a protein selected from the group consisting of a member of the CDS1 subfamily of serine/threonine protein kinases, p53 (TP53), TNF-alpha, HSP70, estrogen receptor, androgen receptor, progesterone receptor, HRAS1-VNTR, CHK2, BRCA1, BRCA2, AIB1, NAT1, NAT2, XRCC1, XRCC2, XRCC5, CIB, importin alpha-1, importin alpha-3, and importin alpha-5.

29. The isolated or recombinant protein complex of claim 27 or claim 28 wherein the protein having tumor suppressor activity comprises an amino acid sequence having at least 80% identity to a sequence selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, and SEQ ID NO: 23.

30. The isolated or recombinant protein complex of claim 27 wherein the protein having cell cycle modulatory activity is selected from the group consisting of a member of the CDS1 subfamily of serine/threonine protein kinases, Cdc25, CDC2a, cyclin-dependent kinase (CDK), CDK inhibitor, a mitogenic cyclin (e.g., cyclin A, cyclin B, cyclin D, etc), p53 (TP53), and CHK2.

31. The isolated or recombinant protein complex of claim 27 or claim 30 wherein the protein having cell cycle modulatory activity comprises an amino acid sequence having at least 80% identity to a sequence set forth selected from the group consisting of SEQ ID NO: 19 and SEQ ID NO: 21.

32. The isolated or recombinant protein complex of claim 27 wherein the protein associated with DNA repair or damage is a protein selected from the group consisting of a member of the CDS1 subfamily of serine/threonine protein kinases, BRCA1, BRCA2, CIB/KIP, TP53, MLH1, MSH2, ATM, CHK2, XRCC1, XRCC2, XRCC5 and importin alpha-5.

33. The isolated or recombinant protein complex of claim 27 or claim 32 wherein the protein associated with DNA damage or repair comprises an amino acid sequence having at least 80% identity to a sequence selected from the group consisting of SEQ ID NO: 13, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, and SEQ ID NO: 23.

34. The isolated or recombinant protein complex of claim 27 wherein the nuclear targeting protein is selected from the group consisting of importin alpha-1, importin alpha-3 and importin alpha-5.

35. The isolated or recombinant protein complex of claim 27 or claim 34 wherein the nuclear targeting protein comprises an amino acid sequence having at least 80% identity to a sequence selected from the group SEQ ID NOs: 9, 11 or 13.

36. The isolated or recombinant protein complex of claim 27 wherein the progesterone receptor protein comprises an amino acid sequence having at least 80% sequence homology to SEQ ID NO: 15.

37. An isolated antibody that binds to a protein complex comprising an EDD protein.

38. The isolated antibody of claim 37 wherein the antibody binds to a protein complex comprising an EDD protein or a portion of an EDD protein sufficient to bind to a protein selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory activity, a protein associated with DNA repair or damage, a nuclear targeting protein, and a progesterone receptor protein

39. The isolated antibody of claim 37 or claim 38 wherein the antibody binds to a protein complex selected from the group consisting of: (i) a complex comprising EDD and CHK2; (ii) a complex comprising EDD and BRCA2; (iii) a complex comprising EDD and CIB; (iv) a complex comprising EDD and importin alpha-1; (v) a complex comprising EDD and importin alpha-3; (vi) a complex comprising EDD and importin alpha-5; and (vii) a complex comprising EDD and progesterone receptor,

40. The isolated antibody of any one of claims 37 to 39 wherein the antibody does not bind to any individual protein of said complex in the absence of another protein of said complex.

41. The isolated antibody of any one of claims 37 to 40 wherein the antibody recognises a conformational epitope of the protein complex.

42. An isolated antibody that binds to the antibody of any one of claims 37 to 41.

43. A kit for detecting or producing a protein complex, said kit comprising an EDD polypeptide or a portion of an EDD polypeptide and a second polypeptides selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory activity,

a protein associated with DNA repair or damage, a nuclear targeting protein, and a progesterone receptor protein or a portion thereof, wherein the portion of the second polypeptide is sufficient to bind to said EDD polypeptide or said portion of an EDD polypeptide.

44. The kit of claim 43 additionally comprising a protein that binds to the EDD-binding protein.

45. The kit of claim 44 wherein the protein that binds to the EDD-binding protein comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, and SEQ ID NO: 23.

46. The kit of any one of claims 43 to 45 further comprising an antibody or ligand that binds to the first or second polypeptide or to the complex formed between said first and said second polypeptide.

47. A kit for detecting or producing a protein complex comprising:

(i) a first compartment comprising an EDD protein or a portion thereof sufficient to form a protein complex selected from the group consisting of: a protein having tumor suppressor activity, a protein having cell cycle modulatory activity, a protein associated with DNA repair or damage, a nuclear targeting protein, and a progesterone receptor protein or a portion thereof, wherein the portion of the second polypeptide is sufficient to bind to said EDD polypeptide or said portion of an EDD polypeptide; and

(ii) a second compartment comprising an antibody or ligand that

binds to a protein selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory activity, a protein associated with DNA repair or damage, a nuclear targeting protein, and a progesterone receptor protein or a portion thereof.

wherein said antibody or ligand that binds to a protein complex does not bind to the individual protein binding partners.

48. A kit for detecting or producing a protein complex comprising:

(i) a first compartment comprising an EDD protein or a portion thereof sufficient to form a protein complex selected from the group consisting of: (i) a complex comprising EDD and CHK2; (ii) a complex comprising EDD and BRCA2; (iii) a complex comprising EDD and CIB; (iv) a complex comprising EDD and importin alpha-1; (v) a complex comprising EDD and importin alpha-3; (vi) a complex comprising EDD and importin alpha-5; and (vii) a complex comprising EDD and progesterone receptor; and

(ii) a second compartment comprising an antibody or ligand that binds to a protein selected from the group consisting of (i) a CHK2 protein; (ii) a BRCA2 protein; (iii) a CIBCIB protein; (iv) an importin alpha-1 protein; (v) an importin alpha-3 protein; (vi) an importin alpha-5 protein; and (vii) a progesterone receptor protein, or an antibody or ligand that binds to a protein complex selected from the group consisting of: (i) a complex comprising EDD and CHK2; (ii) a complex comprising EDD and BRCA2; (iii) a complex comprising EDD and CIB; (iv) a complex comprising EDD and importin alpha-1; (v) a complex comprising EDD and importin alpha-3; (vi) a complex comprising EDD and importin alpha-5; and

(vii) a complex comprising EDD and progesterone receptor.

wherein said antibody or ligand that binds to a protein complex does not bind to the individual protein binding partners.

49. A kit for detecting or producing a protein complex comprising:

(i) a first compartment comprising an antibody or ligand that binds to an EDD protein; and

(ii) a second compartment comprising a protein selected from the group consisting of (i) a CHK2 protein; (ii) a BRCA2 protein; (iii) a CIB protein; (iv) an importin alpha-1 protein; (v) an importin alpha-3 protein; (vi) an importin alpha-5 protein; and (vii) a progesterone receptor protein, or a portion thereof sufficient to bind to an EDD protein.

50. A kit for detecting or producing a protein complex comprising:

(i) a first compartment comprising an isolated or recombinant protein complex selected from the group consisting of: (i) a complex comprising EDD and CHK2; (ii) a complex comprising EDD and BRCA2; (iii) a complex comprising EDD and CIB; (iv) a complex comprising EDD and importin alpha-1; (v) a complex comprising EDD and importin alpha-3; (vi) a complex comprising EDD and importin alpha-5; and (vii) a complex comprising EDD and progesterone receptor; and

(ii) a second compartment comprising an (i) antibody or ligand that binds to a polypeptide selected from the group consisting of a CHK2 protein, a BRCA2 protein, a CIB protein, an importin alpha-1 protein, an importin alpha-3 protein, an importin alpha-5 protein, a progesterone receptor protein and an EDD protein; or (ii) an

antibody or ligand that binds to one or more protein complexes (a).

51. A method for isolating a protein complex comprising an EDD protein or a protein of an EDD protein and a protein selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory activity, a protein associated with DNA repair or damage, a nuclear targeting protein, and a progesterone receptor protein from a suitable cellular source, said method comprising contacting an extract of said cell with an EDD polypeptide or a portion thereof that binds to said protein for a time and under conditions sufficient for a protein complex to form and then isolating the protein complex formed.

52. A method of isolating the protein complex comprising an EDD protein or a protein of an EDD protein and a protein selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory activity, a protein associated with DNA repair or damage, a nuclear targeting protein, and a progesterone receptor protein comprising:

(i) isolating a protein that is a component of the protein complex from a cell that expresses said protein;

(ii) isolating another protein that is a component of the protein complex from a cell that expresses said other protein; and

(iii) combining the proteins isolated at (i) and (ii) in an amount and under conditions sufficient to facilitate the formation of a protein complex.

53. The method of claim 51 or claim 52 wherein the protein is endogenously expressed by the cell.

54. The method of claim claim 51 or claim 52 wherein the protein is

ectopically expressed in the cell.

55. A method for determining a predisposition for disease, or a disease state, said method comprising detecting a protein complex comprising:
(i) an EDD protein; and
(ii) a protein selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory activity, a protein associated with DNA repair or damage, a nuclear targeting protein, a progesterone receptor protein and a protein associated with vascularization,
wherein an elevated level of said protein complex is indicative of a predisposition for disease, or a disease state in said subject.

56. The method of claim 55 wherein the protein complex is selected from the group consisting of (i) a complex comprising EDD and CHK2; (ii) a complex comprising EDD and BRCA2; (iii) a complex comprising EDD and CIB; (iv) a complex comprising EDD and importin alpha-1; (v) a complex comprising EDD and importin alpha-3; (vi) a complex comprising EDD and importin alpha-5; and (vii) a complex comprising EDD and progesterone receptor.

57. The method of claim 55 or claim 56 wherein the protein complex is detected using an antibody or ligand that binds to the protein complex.

58. A method for determining a modulator of the activity, formation or stability of an isolated or recombinant protein complex comprising:
(i) determining the activity, formation or stability of a protein complex comprising (a) an EDD protein or a portion of an EDD protein; and (b) a protein selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory activity, a protein associated with DNA repair or damage, a nuclear targeting protein, and a progesterone receptor

protein or a portion thereof, wherein the portion of the second polypeptide is sufficient to bind to said EDD polypeptide or said portion of an EDD polypeptide, in the absence of a candidate compound or candidate antibody; and

(ii) determining the level of said protein complex in the presence of a candidate compound or in the presence of said candidate antibody

wherein a difference in the level of said protein complex at (i) and (ii) indicates that the candidate compound or candidate antibody is a modulator of said interaction.

59. A method for determining a modulator of the level of protein complex formation comprising:

(i) determining the level of a protein complex comprising (a) an EDD protein or a portion of an EDD protein; and (b) a protein selected from the group consisting of a protein having tumor suppressor activity, a protein having cell cycle modulatory activity, a protein associated with DNA repair or damage, a nuclear targeting protein, and a progesterone receptor protein or a portion thereof, wherein the portion of the second polypeptide is sufficient to bind to said EDD polypeptide or said portion of an EDD polypeptide, in the absence of a candidate compound or candidate antibody; and

(ii) determining the level of said protein complex in the presence of a candidate compound or in the presence of said candidate antibody

wherein a difference in the level of said protein complex at (i) and (ii) indicates that the candidate compound or candidate antibody is a modulator of said interaction.

60. The method of claim 58 or claim 59 wherein the protein complex is selected from the group consisting of: (i) a complex comprising EDD and

CHK2; (ii) a complex comprising EDD and BRCA2; (iii) a complex comprising EDD and CIB; (iv) a complex comprising EDD and importin alpha-1; (v) a complex comprising EDD and importin alpha-3; (vi) a complex comprising EDD and importin alpha-5; and (vii) a complex comprising EDD and progesterone receptor.

61. The method of any one of claims 58 to 60 wherein the modulator enhances complex activity, formation or stability.

62. The method of any one of claims 58 to 60 wherein the modulator partially or completely inhibits complex activity, formation or stability.

63. A method for treating a condition associated with elevated expression of an EDD protein in a cell, said method comprising administering an amount of a compound effective to reduce EDD expression in a cell.

64. The method of claim 63 wherein the condition associated with EDD over expression is a cancer,

65. The method of claim 64 wherein the cancer is a cancer selected from the group consisting of squamous cell carcinoma, hepatocellular carcinoma, ovarian cancer, breast cancer, melanoma, head and neck cancer, adenocarcinoma, squamous lung cancer, gastrointestinal cancer (eg. gastric, colon, or pancreatic cancer), renal cell cancer, bladder cancer, prostate cancer, non-squamous carcinoma, glioblastoma and medulloblastoma.

66. The method of any one of claims 61 to 65 wherein the compound administered comprises nucleic acid.

67. The method of claim 66 wherein the nucleic acid is an antisense nucleic acid, peptide nucleic acid (PNA), ribozyme, or interfering RNA, which is

complementary, in whole or in part, to EDD-encoding RNA.

68. The method of claim 67 wherein the antisense nucleic acid, ribozyme, PNA, interfering RNA or siRNA comprises a sequence that is complementary to at least about 15-20 contiguous nucleotides of a sequence having at least 80% identity to SEQ ID NO: 1 or SEQ ID NO: 3.

69. An antisense nucleic acid, ribozyme, PNA, interfering RNA or siRNA comprising a sequence having at least 80% homology to SEQ ID NO: 47.

70. The use of the antisense nucleic acid, ribozyme, PNA, interfering RNA or siRNA of claim 69 to reduce the expression of EDD in a cell.

71. The use of the antisense nucleic acid, ribozyme, PNA, interfering RNA or siRNA of claim 69 to inhibit cellular proliferation.

72. A pharmaceutical composition comprising the antisense nucleic acid, ribozyme, PNA, interfering RNA or siRNA of claim 69.

73. The use of the composition of claim 72 to reduce the expression of EDD in a cell.

74. The use of the composition of claim 72 to inhibit cellular proliferation.

75. A method for determining the ability of a cell to phosphorylate CHK2 in response to a DNA damaging agent comprising determining the level of expression of EDD in said cell, wherein reduced or suppressed EDD expression indicates that the cell has reduced ability to phosphorylate CHK2 in response to a DNA damaging agent.